

CLAIMS

1. An electronic apparatus characterized in that there are provided:

a reference signal generating unit for generating a reference signal;

a temperature measuring unit for measuring the internal temperature of the apparatus and generating a temperature signal;

a driving unit for generating a driving signal and outputting said driving signal to a motor coil of a unit to be driven;

a receiving unit for receiving a signal transmitted from the outside via said motor coil;

a detecting unit for detecting the type of the signal received by said receiving unit; and

an examining unit for, based on the detection result of said detecting unit, outputting, via said motor coil, said temperature signal or digital data obtained by converting said temperature signal.

2. An electronic apparatus according to Claim 1, characterized in that there are provided:

a storing unit for storing adjustment data used for adjusting the frequency of said reference signal in accordance with the temperature; and

an adjusting unit for adjusting the frequency of said reference signal in accordance with the internal temperature based on said temperature signal and said adjustment data.

3. An electronic apparatus according to Claim 2, characterized in that the signal transmitted from the outside includes an adjustment signal corresponding to said adjustment data.

4. An electronic apparatus according to Claim 2,<sup>z</sup>, characterized in that said driving unit generates said driving signal based on an output signal of said adjusting unit.

5. An electronic apparatus according to Claim 1, characterized in that said examining unit controls said driving unit so as to suspend driving of said motor coil while said temperature signal or said temperature digital data is output via said motor coil.

6. An electronic apparatus according to Claim 1, characterized in that said examining unit selectively outputs via said motor coil a signal corresponding to the frequency of said reference signal and said temperature signal based on the detection result of said detecting unit.

7. An electronic apparatus according to Claim 6, characterized in that said examining unit outputs the signal corresponding to the frequency of said reference signal as said driving signal from said motor coil by disabling an adjustment operation of said adjusting unit.

8. An electronic apparatus according to Claim 1, characterized in that said temperature measuring unit outputs, as said temperature signal, a temperature-sensing oscillation signal whose frequency varies in accordance with the internal temperature of the apparatus.

9. An electronic apparatus according to Claim 1, characterized in that:

said reference signal generating unit is provided with an oscillation circuit using a quartz oscillator; and

said unit to be driven is an analog timing unit in which a timing operation is performed using analog hands.

10. An external adjustment device, having a motor coil, for adjusting an external electronic apparatus, said external adjustment device being characterized in that there are provided:

a coil for electromagnetically coupling with said

motor coil;

a receiving unit for receiving a temperature signal or  
the temperature digital data, which is a signal via said  
coil, from said electronic apparatus;

a transmitting unit for transmitting a signal to said  
electronic apparatus via said coil; and

an adjustment signal generating unit for generating an  
adjustment signal based on said temperature signal or said  
temperature digital data received by said receiving unit and  
the driving signal of said motor coil received by said  
receiving unit, and for outputting said adjustment signal to  
said transmitting unit.

11. An external adjustment device according to Claim 10,  
characterized in that there is provided a signal generating  
unit for generating a first signal for instructing the  
output of said temperature signal or the output of said  
temperature digital data and a second signal for instructing  
disablement of an adjustment operation, and outputting the  
signals to said transmitting unit.

12. An external adjustment device for adjusting an  
external electronic apparatus comprising a motor coil  
outputting a temperature-sensing oscillation signal whose  
frequency varies in accordance with the internal temperature

of the apparatus as a temperature signal or temperature digital data obtained by converting said temperature-sensing oscillation signal, and an adjusting unit for adjusting the frequency of a reference signal in accordance with said internal temperature based on either of said temperature signal and said temperature digital signal and the adjustment data, said external adjustment device being characterized in that there are provided:

a coil for electromagnetically coupling with said motor coil;

a receiving unit for receiving, via said coil, the temperature signal or the temperature digital data which is a signal from said electronic apparatus;

a transmitting unit for transmitting a signal to said electronic apparatus via said coil; and

an adjustment signal generating unit for generating an adjustment signal based on said temperature signal or said temperature digital data received by said receiving unit and the driving signal of said motor coil received by said receiving unit and for outputting said adjustment signal to said transmitting unit.

13. An external adjustment device according to Claim 12, characterized in that said adjustment signal generating unit generates said adjustment signal based on said driving

signal received by said receiving unit while the adjustment operation of said adjusting unit is disabled.

14. An external adjustment device for adjusting an external electronic apparatus comprising a motor coil outputting a temperature-sensing oscillation signal whose frequency varies in accordance with the internal temperature of the apparatus as a temperature signal or temperature digital data obtained by converting said temperature-sensing oscillation signal, and an adjusting unit for adjusting the frequency of a reference signal in accordance with said internal temperature based on either of said temperature signal and said temperature digital signal and the adjustment data, said external adjustment device being characterized in that there are provided:

R *a* coil for electromagnetically coupling with said motor coil;

    a receiving unit for receiving a signal via said coil from said electronic apparatus;

    a transmitting unit for transmitting a signal to said electronic apparatus via said coil;

    a frequency measuring unit for each measuring the frequency of said temperature signal received by said receiving unit, and the frequency of said driving signal received by said receiving unit while the adjustment

operation of said adjusting unit is disabled; and  
an adjustment signal generating unit for generating an  
adjustment signal based on the measurement result of said  
frequency measuring unit and outputting said adjustment  
signal to said transmitting unit.

15. An adjusting method for adjusting an external  
electronic apparatus having a motor coil, the adjusting  
method for the electronic apparatus being characterized in  
that there are provided:

a first step of transmitting, to the electronic  
apparatus via said motor coil, a signal for instructing the  
output of a temperature signal corresponding to the  
temperature measured by the electronic apparatus or the  
output of a temperature digital signal obtained by  
converting said temperature signal;

a second step of receiving said temperature signal or  
said temperature digital signal transmitted from said motor  
coil and sensing the temperature measured by the electronic  
apparatus;

a third step of transmitting, to the electronic  
apparatus via said motor coil, a signal for instructing the  
start of disablement of an adjustment operation;

a fourth step of receiving a driving signal transmitted  
from said motor coil and measuring the frequency of said

00000000000000000000000000000000

driving signal;

a fifth step of repeating said first step through said fourth step a plurality of times and generating an adjustment signal based on the sensed temperature and frequency; and

a sixth step of transmitting said adjustment signal to the electronic apparatus via said motor coil.

16. An adjusting method for adjusting an external electronic apparatus having a motor coil, the adjusting method for the electronic apparatus being characterized in that there are provided:

a first step of transmitting a signal for instructing the start of disablement of an adjustment operation to the electronic apparatus via said motor coil;

a second step of receiving a driving signal transmitted from said motor coil and measuring the frequency of said driving signal;

a third step of transmitting, to the electronic apparatus via said motor coil, a signal for instructing the output of a temperature signal corresponding to the temperature measured by the electronic apparatus or the output of a temperature digital signal obtained by converting said temperature signal;

a fourth step of receiving said temperature signal or

0962008264447400

said temperature digital signal transmitted from said motor coil and sensing the temperature measured by the temperature measuring unit;

a fifth step of repeating said first step through said fourth step a plurality of times and generating an adjustment signal based on the sensed temperature and frequency; and

a sixth step of transmitting said adjustment signal to the electronic apparatus via said motor coil.

092002E&P11200